# NAVSEA P2 WORKING GROUP
# 3-5 JUNE 2003
# Meeting Highlights

## TUESDAY 03 JUNE 2003

**Introductions – Ms. Julie Prevatt and LTGJ Jon Pentzien**

Ms. Julie Prevatt and LTJG Jon Pentzien of NAVSEA 04RE welcomed the attendees and provided administrative information. See Enclosure (1) for the list of attendees. The agenda was reviewed, as were Action Items (AI) that would not be covered during the rest of the meeting. The Action Items are provided as Enclosure (2). Finally, copies of minutes and presentations will be available on CD's. They will be supplied upon request. Contact Ms. Kimberly Gray if you would like a CD.

**NAVSEA P2 Program Overview – LTJG Jon Pentzien**

LTJG Pentzien began by explaining the purpose and objective of this meeting and provided a briefing on his vision on the future of the NAVSEA P2 Program. He recognized the NAVSEA and CNO Environmental award winners, discussed the new personnel and the re-organizations that have taken place at NAVSEA Headquarters. A copy of the new organization is provided in the presentation. During this reorganization Littoral ship have been moved into PEO Ships, Combat Systems have moved into Integrated Warfare Systems. The newest members joining NAVSEA 04RE are Ms. Lyn Carroll and Mr. Tim McBride.

**NAVSEA Corporate HAZMAT Cradle to Grave Process – Mr. Charles Dunn**

Mr. Dunn briefed the group on the NAVSEA Corporate HAZMAT Cradle to Grave Process. At the present time the group is developing a standard NAVSEA HM management process. Currently they are using an encompassing database and an integrated management system that is using a program developed by SAP. They are still in the process of obtaining more clarity and standardization with these products.

Mr. Dunn gave a brief overview of the meeting that was held 28-29 May 03 in Norfolk. The purpose of this meeting was to begin implementing CHRIMP / regional CHRIMP; to begin working on standardization of the HAZMAT process; and to establish the basis for the process to be followed. . Representatives of NAVSEA, the naval shipyards, NAVSUP, and the Fleet Industrial Supply Centers (FISC) met as a Regional Consolidated Hazardous Material Reutilization and Inventory Management Program (CHRIMP) Project Oversight Advisory Team to plan for the implementation of CHRIMP in the naval shipyards. The meeting had five objectives. The Advisory Team accomplished all of the objectives, with the exception of developing a POA&M to implement regional CHRIMP at each of the naval shipyards. However, some progress was made on achieving this objective by reaching consensus on the approach to follow to develop a standard POA&M and MOAs. The Advisory Team established a common vision for CHRIMP in the naval shipyards, encompassing benchmarks, best practices, and a standard process. It also identified issues and the actions that must be taken to implement CHRIMP in the shipyards. The Advisory Team planned a series of next steps. In June and July, NAVSUP will conduct assist visits at each of the naval shipyards to learn about hazardous material /hazardous waste processes in place, in support of production operations. Using lessons learned from PNSY CHRIMP implementation, as well as other successful Navy CHRIMP implementations, the Project Oversight Advisory Team (POAT) will develop a standard

POA&M and a draft MOA for naval shipyard implementation of a regional CHRIMP process. The POAT will finalize the standard POA&M and draft MOA at the next meeting, scheduled for July 15-17, 2003 at Pearl Harbor Naval Shipyard & IMF.

**INSURV Brief – LCDR Root**

LCDR Root gave a brief background on INSURV and how it has consolidated into one fleet organization at Norfolk. She then went over some issues/problems that they face with doing their inspections. Some of their observations pertaining to Solid Waste Equipment Compress Melt Units were the cleaning is a challenge, improved units may be back-fit starting FY-06, safety cover gas shocks will be improved with the next design, and PMS responsibility is not fully accomplished. LCDR Root then went on to discuss Pulpers. Most of the discrepancies found during inspections are with the indicator lights. Large pulpers in small spaces don't allow enough room for accessing piping and components behind stainless steel sheathing. It also interferes with properly cleaning areas affected by the mess from the junk box. PMS is not accomplished in all applicable work centers and some of the technical manuals come up missing. Lastly, she briefly discussed the Oil Pollution Abatement (OPA) Systems. Some of the issues regarding this included the continue documenting installation deficiencies; Operators and maintainers lack enough knowledge to understand how everything works together; bilge water management is a continuing problem; Unauthorized detergents foul oil water separator; and components and the drawings are out of date.

**NAVY VOC/HAP Reduction Effort – Mr. Ben Zlateff**

Mr. Zlateff provided information on the results of the first phase of the project. This phase identified the types and quantities of general cleaning solvents used at the major NAVSEA industrial activities, and the amounts of Volatile Organic Compounds (VOC), Hazardous Air Pollutants (HAPS) and NAVSEA Target Chemicals contained in them. He also provided information on the second phase of this project. The second phase will identify specific solvent products where substitution will be beneficial, the associated industrial process technical documentation and stakeholder information, and a market survey and selection of potential substitutes for further testing and validation.

**ESH Reorganization/Consolidation in San Diego – Mr. Dexter Haight**

Mr. Haight gave an overview of the new reorganization that had taken place at their facility. Their mission of ES&H is to ensure that environmental and safety requirements are met for individual commands as well as for the entire consolidated entity. During this reorganization 6 commands were affected (SIMA, SUPSHIP, Fleet Technical Support Center, PacivFTSCPAC, Consolidated Diving Unit (CDU), South West Region Maintenance Center (SWRMC), and Homeport Engineer Technical (HET). With this re-organization and using the proposed SWRMC EHS structure, this will eliminate a need for two GS-018-11 (CNRSW) FTEs, a minimum savings of $112,000 in the first year (assuming GS-11 step 1, plus fringe benefits).

**Portsmouth NSY P2 Efforts and CHRIMP Status – Mr. Tim Dunn**

Their CHRIMP program is mandated by Code 100 and partnered with Code 106 and other various codes. Some of the previous challenges were HM stockpiling, little or untimely data sharing, inadequate communication, purchase card purchased HM, improper storage of HM,

Code 500 operated CHRIMP trailer, Code 900 operated many CHRIMP areas, and significant disposal costs just to name a few. Today's process includes 2 CHRIMP Trailers, one purchase point, pickup and delivery, four credit card purchasers, pallets of HM removed from shops There are savings with CHRIMP.

They have current success in their P2 Program with the rag-laundering contract, plural component painting study article to be published in "Currents", Functional CHRIMP Program at PNS, and assisting NAVSEA and NAVSUP in CHRIMP implementation at shipyards. Mr. Dunn did bring up an issue to the working group concerning Zinc Chromate. Lockheed Martin brought on a new cabinet for a submarine. The cabinet had minor paint damage from manufacturing. The manufacturing procedure (last updated 4/19/01) requires Mil Spec TT-P-1757A, Type I, Color Y Zinc Chromate primer. Lockheed Martin wanted to repair the paint damage with Zinc Chromate primer using <1 pint of primer. The shipyard has delisted all Zinc Chromate paints from their Authorized Use List (AUL). Code 106, 2300 and 250 all said the contractor couldn't use it because it's toxic to workers and not allowed by NAVSESA paint schedule. Apparently the vendor were never told of the issue and the use of Zinc Chromate primer is prevalent in many cabinets throughout the submarine fleet (including Virginia Class). The NAVSEA's paint schedules do not show the locations of Zinc Chromate coated cabinets. Workers could possible be exposed to this while working on these cabinets.

**Norfolk NSY Status/Issues – Ms. Nicole Starrette**

Ms. Starrette gave a brief overview on NNSY current initiatives, which included P2, RCRA, Solid Waste and Future Plans. The shipyards HM/HW Reduction focused on TRI reportable chemicals and large quantity waste streams. They identified 12 products to investigate for process improvement, product substitution, and equipment replacement. Their P2 team is currently at 5 people; more focus is being placed on P2 initiatives, and increasing workload.

Some of their success stories include Battery Recycling Project. They are using rechargeable batteries, which yielded a $2,200 cost avoidance (based on 2002 data). Another success was their Installation Restoration Removal Project. They recycled approximately 3,400 pounds of metal; reuse 500-1,000 tons of concrete debris for the construction of wetlands and storm water controls. They are continuing with their mass balance/zero discharge project (SERDP). Shop inventoried and database created ($P_3$OSEIDONS – P2 Opportunities in DoD Industrial Operations). The shipyards future plans include continue HW/HM reduction project, continue tracking metrics, develop an improved system for tracking P2 success stories and improve system for follow-up on implemented P2 projects.

**Puget Sound NSY P2 Efforts and CHRIMP Status – Mr. Dave Alguard**

P2 awareness and direction is added to all Instructions during review. This is done to give awareness at all working levels and a hammer to use on those who don't quite understand P2. Toxic Release Inventory (TRI) chemicals are segregated and concentrated in waste streams to monitor their weight accurately. TRI chemicals are found in waste streams at varying concentrations. Some waste streams have hundreds of thousands of pounds annually. When a huge waste stream has a TRI chemical in it, it can result in a large amount of TRI to report. However, it was found that there may be a wide range of concentrations of a TRI chemical

within that waste stream and the mid point of that range still grossly overestimated the true average concentration of the waste stream. The answer to this problem is to segregate this waste into a new waste stream. (This may also lead to the possibility of recycling).

**Pearl Harbor NSY P2 Status – Mr. Alan Mukai**

Mr. Mukai gave a brief background on P2 and the Clean Water Act (CWA). Currently they have a copper study in process to identify the source of cooper discharges into the dry docks and harbor waters; then implement Best Management Practices to eliminate/reduce copper discharges. A $10 million state of the art abrasive blast/paint facility began operation April 2003. Some other P2 equipment include: Abrasive Blast Media Recycling System, Steel Grit Blast and Recovery System, Mini-Max Parts Cleaner, coolant Recycler and Digital Imagining Equipment.

**NAVSEA/NAVSUP P2 Partnership – Mr. Terry Tibbs**

NAVSUP's primary focus is Hazardous Material Control and Management (HMC&M). Some of there major issues are: Type – Ships Hazardous Material List (T-SHML) – Refining the Ship HM Inventory (SHML) Feedback Report (SFR) (This is working with Ships, NAVSEA, and NAVAIR to ensure only Authorized and Restricted HM in ships) and CHRIMP – Ships must have active Program. Some of there current initiatives include Enhanced CHRIMP Afloat Program (ECAP).

- Enhanced CHRIMP Afloat Program (ECAP) technicians assist and train sailors in shipboard CHRIMP Operations while in port.
- HICSWIN (conversion to RHICS Afloat) uses scaled back version of Shore RHICS, allow CHRIMP operations, prototype in a large ship in CY 04.
- Shoreside Hazard Material Center (HMC) is first Point of Entry (POE) for HM Requisitions.
- New Construction Ships – sailors trained in CHRIMP/HICS prior to ships sail-Away. Working to ensure adequate and proper storage is available.
- Equipment Provisioning – Mobile Reuse Center is still in demand for large decks….and ashore. There are 5 available for refurbishment. ECAP Technicians attempt to provide POCs for ships installed P2 suite when questions arise.

**Open Forum - All**

The open forum gave the members a chance to address any issues or concerns that they/their program may be facing. Discussions began on how to help Mr. Dunn with his problem with Zinc Chromate. The group recommended that this be address in conjunction with the Target Chemical List that was recently signed out by NAVSEA 04RE. The group agreed. However, to take it one step further, LTJG Pentzien initiated a new subcommittee entitled the Target Chemical List Subcommittee. The purpose of this subcommittee is to make the Target Chemical List effective and to address any other issues dealing with chemicals. This subcommittee will be comprised of members of the working group, shipyards, and other agencies. LCDR Root brought up the issue of the lack of training on shipboard waste equipment and the burden it is for the sailor. With the high rate of turnover in the Fleet, it is hard to keep them up to date on the latest information. Currently there are videos and a technical manual for the sailor to use, however, the trained ones leave and there is no cross training.

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## WEDNESDAY 04 JUNE 2003

**SW Region P2 Initiatives – Mr. Ed Bonnes**

Regional advocacy is to match Navy Policy to Executive Order directives. They would like to see P2 made a class I budget requirement. They are also implementing compliance audit programs, which emphasize P2 to achieve compliance. The regional P2 plan will include energy/water conservation, Affirmative Procurement Program (APP), recycling, alternative fuels. They also plan to phase out non-exempt uses of Class 1 ODS by 2010.

They have been utilizing the Navy Pollution Prevention Equipment Program (PPEP), have one of the Navy Environmental Leadership Program (NELP) sites at NAS North Island where they have a Pre Production Test Program for PPEP Candidates. Equipment presently being tested includes: Marine Mobile Oil Evacuation System for Rigid Inflatable Boats and small craft; Mobile Bilge Cleaning System (Steam/Vacuum); Closed Loop Wash Racks which uses steam and a Sugar Cane Ash Megasorber filtration system; Recyclable absorbent pads; Rechargeable Flashlight Batteries; and Coating operation video on P2 Paint cleanup techniques. They also include energy, alternative fueled vehicle projects in the P2 Program.

**NAVSEA 05M1 Paint Technologies Update – Mr. Mike Chapkovich**

Mr. Chapkovich gave a brief overview of the new organization that has taken place in NAVSEA 05M. They are currently responsible for ensuring "compliance" of navy coatings with federal, state and local VOC/HAP rules. Currently all coatings are complaint. The reformulation program is underway to address effect of recently upheld 33% reduction in ozone standards upheld by Supreme Court (Feb 02). Likely to lead to coatings with VOC level of 250 gm/l from currently level of 340 gm/l. Their goal is to quantify coating pollution prevention successes and show life cycle cost savings. In their advanced coating technology, NRL R&D is looking at new, rapid-cure technologies. These chemistries include epoxy, polysulfide epoxy, and epoxy/urethane. The patent pending NRL epoxy/polyurethane chemistry will have the following consistencies. A rapid cure (minutes) once applied to tank wall; high film build (20-mils) in one coat; no dry time, tank can return to service immediately; low to high temperature application window (0F-100F); and UV-stable system possible.

**NAVSEA Carderock Code 632 P2 Initiatives – Mr. Mike Chapkovich**

An update and overview was given with regards to the new opportunities that are currently being explored at NSWC Carderock. They include aerosol can puncturing device, and a fluorescent tube crushing device. The goal of the P2 Afloat Program is to have rapid insertion of commercial technology to the Fleet. This is done by reducing HM usage and off-load, reducing HM procurement and disposal cost, decreasing maintenance labor hours and improving sailor quality of life. Code 632 established a P2A program to address the surface fleet. Here they identify major shipboard waste streams, select COTS equipment and process changes, collect usage data and feedback from ships' crews, project return on investment analyses, develop class specific suites of equipment and validate cost savings through ROI reassessment. Their ROI regarding successful P2 opportunities pay back in less than 3 years. Some of the ROI cost

factors include waste generated, consumable, and maintenance labor hours. This is determined on a 10-year service life of equipment.

The insertion of new P2 technologies includes Aerosol Can Puncturing Device (ACPD) and Fluorescent Tub Crushing Device (FLCD). The Aerosol Can Puncturing Device was done at the request of the Fleet for a safe and effective method to reduce volume of aerosol cans aboard large deck ships. Carderock completed successful shore and shipboard test and evaluation of ACPD system in June 2001. They recommended ACPD System be installed aboard four ship classes as modification of existing P2A SHIPALTS. This acquisition is still on going; installations are planned for FY 03 – 05.

Fluorescent lamps are a storage problem for the Fleet. An aircraft carrier collects 11,000 to 15,000 expended fluorescent lamps during a typical 6-month deployment. Carderock was tasked to identify COTS FLCD and test and evaluate those with shipboard potential. The factors that were involved in these tests were safety, mechanical function and mercury exposure and emissions. A couple of concerns were raised during these test such as, mercury exposure during drum change-out was over allowable levels; high potential for operator exposure without PPE, noise levels during bulb eater operations are over allowable levels, units leak air contaminated with mercury vapor at joints and component connections during operations, and FLCD components are contaminated with mercury laden dust after usage. Recommendations were made for current shipboard operations concerning mercury exposure and noise levels.

**FASTT Discussion – Mr. Bob Vozzella**

Mr. Vozzella briefed the group on the FASTT happenings during the last year, alignment with NAVSEA goals, ROI and saving data, and technology transfer. This year the FASTT Team has a full schedule until October 2003. Some of the things that the FASTT Team needs is top level advocacy to help tear down artificial barriers. These barriers are in the areas of environmental and maintenance (need to work together), the color of money (restricts what can be done on wide ranging environmental programs), the color purple (Intra, Inter-Service rivalry), the color green (not invented here), and more green (the need for saving resources).

**NUWC Newport P2 Program Status – Mr. Tom Cook**

Mr. Cook gave an alternative perspective to CHRIMP. The challenge here is to implement HMC&M programs at Research, Development, Testing and Evaluation (RDT&E) facilities such as NUWC, Newport using the HSMS and HAZMIN/HAZMART Centers. CHRIMP is What not a How. To comply with the "What" of the CHRIMP philosophy. NUWC, Newport has employed an alternative approach. The physical HAZMINCEN concept is de-centralized into Hazardous Material Control Nodes. These nodes operate like mini-HAZMINCENS through out the Division. They are staffed by personnel at the operational level, and have connectivity to a centralized database using a tailored COTS information system called HAZMATRACK. A working alternative approach for CHRIMP gives you a single organizational entity responsible for CHRIMP, a central HAZMINCEN (central management with distributed storage), full participation within the physical/jurisdictional bounds, single up to date AUL addressing type and quantity, and a proactive chain of command support (ISO 14001 EMS, Environmental Steering Committee, ESS Department and requisite instructions).

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**NAVAIR Environmental Products and Services – Mr. Dave Brock**

Mr. Brock gave a brief overview of some of the products that NAVAIR is currently working on. They include things such as Technology Need Survey (TNS), Environmental Systems Allocation (ESA), Hazardous Material Analysis Tool (HAT), Regulatory Impact Summary Consolidation, and Customer Support Group (CSG). The TNS collects the user identified needs and ESH problems. This survey will provide a method to formalize Phase 1 (identify and quantify needs) in a format that is DoD compatible. The ESA contains actual HM use and waste generated information. HAT is a tool used to identify and manage HM in maintenance manuals. Regulatory Impact Summary Consolidation is a logical repeatable process that estimates the impact of upcoming regulatory actions on Naval Aviation. The purpose behind this is to identify future ESH regulatory issue that will impact the aviation community. Then they quantify impact on manuals, specific location, weapon system, quantify by actual material usage and waste generation, then evaluate how existing projects/programs can mitigate the expect impact. If the impacts are estimated, then you can prioritize the requirements and manage the risk. The Customer Support Group is their outreach program that actually visits the sailor at their facilities. They perform 6 – 8 visits a year. The thing that makes them different than other similar groups is that they have the personnel on the team to actually make the necessary changes. NAVAIR have the engineering expertise with the material and process people as well as the logistician to ensure the supportability of the change is there. They also have facility folks and environmental engineers to make sure the change is implantable and is environmentally sound. They also have members of the P2 Equipment Program out of the Lakehurst, which actually delivers needed equipment to the fleet.

**Combined Services Solid Waste / Recycling Working Group – LTJG Jon Pentzien**

A brief overview of the past 3 meetings was given to the group. So far this group has been working on the following

- Revision to the current recycling policy DoDI 4715.4
- QRP Guidance Update – issues identified by the DoD Controller is keeping this from completion. The first is being able to use funds generated via the QRP in a particular year subsequent years (the wording in 10 USC 2577 is vague and suggests revenues generated from a recycling program in a given year can be carried over to future years as a reserve.) The second is clarification on the concept of donations to the QRP, i.e, what types of donations a QRP can and cannot accept.

**Environmental RDT&E & Technology Transfer P2 & Compliance – Mr. Bob Frederickson**

An overview was given regarding their current and completed technology evaluation projects such as

- Vegetable Oil BioDiesel- Biodiesel reduces particulate, CO, and hydrocarbon emissions. The process converts used vegetable oil (a solid waste) into fuel for diesel engines.
- Reduction of Diesel Engine Emissions – ESTCP demonstration of catalyzed soot filters (CSFs) for reducing particulate matter emissions from new and retrofit diesel engine systems. Installed eight "passive" CSFs on buses for field test.
- Optimizing Oil-Change Intervals of DoD Vehicles – DoD generates and disposes of large amount of used motor oil from tactical and non-tactical vehicles. Used oil is considered

HW if not recycled. Extending the life or the oil change intervals will reduce logistics and procurement cost and disposal cost. Develop the use of real time oil quality sensor and demonstrate improved oil and filer technologies.

- No Foam Unit – Routine vehicle discharge tests release AFFF to the environment and the foam contains extreme foaming activity, high BOD and COD fluorinated surfactant compounds. Unit substitutes biodegradable dye solution or water for discharge test. Eleven united funded through FY02 and 10 units planned for FY 03. Patent pending and vendor license in Jan 2003.
- Demonstrations underway – The following technologies are being demonstrated: Destruction of solvent based waste paint; Low VOC barrier coatings for industrial maintenance; Effect of air emissions from vehicles using Biodiesel made from cooking grease; No Foam unit for aircraft hangers; and alternatives to AFFF.

**High Impact Cleaner the Cleaning Solution – Mr. Steve Clark**

High Impact is a water based, biodegradable and non-abrasive and non-flammable soil remediation cleaner that can be used to remove hydrocarbons in the workplace. It is perform and designed to comply with ES&H requirements, DoD directives and Executive Orders. This technology was developed based on the principle of effectively addressing the complete problem. High Impact's micro-fractionation technology maximizes safety by eliminating the volatile organics ability to vaporize. This greatly reduces the change for a spark or static electricity to ignite fuel vapors. How are they different from other degreasers? Well they are completely safe and effective, environmentally friendly, and is fire retardant so it easily stored and shipped. Its effect on shipboard Oil Water Separators and their effluents would have to be studied.

**Purotek Corporation – Mr. David Capehart**

PuroTex Corporation is in the business to reduce pollution by applying their Ozone based water quality enhancement technology into several fields. Some of these include:

- Apply Ozone Pre-Treatment to water used in large commercial and institutional laundries
- Ozone based treatment for cooling tower condenser water. Ozone is applied as a "stand alone" chemical free treatment program. It provides anti-microbial treatment, scale prevention and corrosion inhibition. Ozone allows the cooling tower to be operated with less bleed or "blow down" which conserves water. The water that is discharged is free of chemical residue. This greatly reduces pollution.
- Ozone for Wastewater Remediation – Ozone is used to pre-treat cyanide laced wastewater so it can be safely sent to public wastewater treatment systems. Ozone is regenerated from spent etching solutions in the metal finishing industry so it can be reused instead of being discarded. Ozone is employed instead of Chlorine to rinse vegetables. Ozone is used to disinfect carcass rise water in the meat packing industry.

Ozone has broad spectrum of operational effectiveness. Ozone is safe for direct contact with food (both meat and vegetables) yet is able to extract heavy metals from the grasp of powerful cleaning solutions.

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## Open Forum

**P2 in Contracting Subcommittee – LTJG Jon Pentzien**

LTJG Pentzien updated the members on the current status of the subcommittee. At the present time the group has drafted a letter that recommending a contractors guide be developed by field activities and that this guide be referenced in section J of their maintenance and repair contracts. Another product is providing a compilation of lessons learned from an ACAT I acquisition program on how P2/ESOH was contractually imposed upon their prime contractor. Scope of lessons begins with program office planning and concludes with in-place contract documents. Includes approved invoked P2 text of the CVN-21 Program. The group also had a guest speaker Mr. Ed Liu from (EFA Chesapeake) who spoke on Construction, Demolition and Deconstruction (CDD). Mr. Liu gave a brief overview on the common deconstruction terms and why people use deconstruction. It was stated that construction and demolition wastes comprised a third of all solid waste gendered by the USN in 2001. Some of the challenges in doing CDD are changing people's mindset, accommodating various schedules, and adjusting business practices. Demolition is solidly entrenched as the standard operating procedure and must be overcome in order to succeed. Not much is known about local markets for salvaged materials. Cost avoidance and life cycle costs may or may not be part of the cost estimates. Time must be planned to allow deconstruction to happen. Contracting doesn't know how to address deconstruction at this time. In order to have deconstruction take hold, there must be command support, standard guidance, confidence in the concept and reproducibility of results. For more information regarding CDD you can contact Mr. Ed Liu at liuen@efaches.navfac.navy.mil

## THURSDAY 05 JUNE 2003

**TEAM SUBMARINE – Mr. Dave Cartwright**

Some of the current TEAM Submarine Programs are:

- Submarine Hazardous Material Inventory and Management System (SHIMS) – SHIMS Service release 1 recently distributed. However it is too soon to determine reduction in HM offloads from submarines. Offload characterization studies conducted though the P2 for Submarines (P2S) program will help to define future reductions. Some of the benefits associated with SHIMS are reduced HM life cycle costs, enhanced personnel health and safety, improved operational readiness, and standardize HM systems. People whom are interested in SHIM training, this is available through NSWCCD SHIMS Implementation team via COMSUBRON request.
- P2 for Submarines (P2S) Program – The objective here is to reduce HM offloads, rapidly transition solutions directly to Fleet and facilitate homeport compliance with environmental regulations. Some of the benefits are reduction in HM procurement and disposal cost. Reduced storage and weight requirements. Pier side assessment conducted about USS DALLAS (SSN 700) and USS RHODE ISLAND (SSBN 740) identified over 40+ P2 opportunities.
- VIRGINIA (SSN 771) Class Submarine Program – One hundred sixty-nine design/build environmental analyses identify P2 opportunities. Detailed Impact analysis identifies preferred consumables for construction, maintenance, and operations. Resource Library

being developed to support P2 for VIRGINIA Class lifecycle and benefit future acquisition programs.

- SSGN Conversion Program – Updated SSGN conversion Program Programmatic Environment, Safety and Occupational Health Evaluation (PESHE) signed 30 Sept 02. ESOH Hazard Analyses for new and modified systems will identify P2 opportunities. Lastly several SSGN ESOH Hazard Analysis process are being adopted by NAVSEA Programs.

Some of the issues faced by TEAM Sub are asbestos. The first issue is to ensure personnel protection during maintenance or repair activities that require removal/repair of Thermal Systems Insulation that may contain asbestos containing material. Their goal is to prohibit the use of ACM on submarines. (Applicable only to new procurements. Existing application will not be removed solely for the purpose of removing ACM.) Another issue is NAVSEA has developed a portable Topside chlorination/dechlorination system to control biofouling of seawater system while in port. Pearl Harbor has an NPDES (National Pollutant Discharge Elimination System) permit to discharge effluent from Topside chlorination operations. The current action is that NAVSEA intends to issue three letters to provide shipyards and fleet with NAVSEA's position on the use of the TC/D.

- SEA 07T Technical Letter – provides data on effluent testing and bioassay result to submarine homeports, shipyards, and forward deployed sites.
- SEA 04R - provide NAVSEA position to Naval shipyard.
- SEA 04R - provide submarine homeports and fleet with NAVSEA guidance.

The third issue is a Portable Hydraulics Filter. Two units are currently being tested. The filter is proven technology that is hatch-able to allow on-board filtration (water and particulate) of hydraulic fluid. The payoff is reduced quantity of hydraulic fluid procured and disposed, and associated storage, transportation, and handling cost.

The last issue is Submarine Post-Launch Missile Tube Effluent that may contain potentially hazardous constituents (lead and cyanide). NAVSEA is looking into ways to mitigate impacts to facilities. They are also investigating treatment technology proposed by JHU-APL. Finally, CNO (N45) has been requested to revise OPNAVINST 5090.1B to allow the discharge of submarine missile tube post-launch wastewater beyond 12 nautical miles of shore.

**PEO SHIPS – Ms. Lyn Carroll**

A brief update was presented regarding the status of Ensolve. The issue is to develop a bio-mechanical oil water separator (OWS) that is capable of cleaning oily bilge water and gas turbine water wash to oil levels below 5 ppm. Their goal is to find a dependable, low maintenance, cost-effective, and reliable OWS. Some other issues and requirements needed to make this happen are: a DDG class ship will generate approximately 1500 gallons of bilge water daily; and the disposal for oily bilge water costs as much as $2/gal. Environmental regulations are becoming more stringent on local, national, and international levels and manpower for surface and subsurface combatants is decreasing. Some of the benefits of this are a compatible

with strong degreasers, shipboard chemicals, AFFF, oils, and grease. Reduction in bilge water disposal costs to under $0.04/gal and automation will allow un-manned operation.

Phase 1 objectives of this project were to test the effects of different coalescing plate packs, test the effect of heat on oil/water separation and to test the effectiveness of an inertial separator. Phase II objectives were to construct prototype Bio-Mechanical Oil Water Separator based on Phase I Option design, minimize preventative maintenance for 30 days hands-free, optimize the biological remediation, test prototype performance at EnSolve's facility, and perform shore side testing at Naval facility.

**Environmental Sensor Technologies – Mr. Mike Putman (SPAWAR)**

The Environmental Science Division at SPAWAR focuses on RDT&E and direct support in environmental quality assessment and remediation with emphasis in the marine/estuarine environment. Their goal is to develop improved assessment, monitoring and remediation technology for environmental restoration, compliance and homeland defenses.

Some of their project includes the following:

- Total Copper Analyzer – Specification include real time continuous measurement. The range is 5 ppb-10ppm Cu, accuracy is 10% of reading, and precision is 5% of reading. Some accomplishments with this are development of automated in-line ultrasonic digestion process. Demonstrated equivalency of ultrasonic digestion to EPA standard method. Currently there will be a dry dock demonstration in July 2003 at PSNSY and at PHNSY in FY04.
- Oil Spill Detection is a floating, low profile multi channel radio link that can detect oil in the water. PSNS currently uses this system.

Sensor and Systems Technologies are currently under development or available for commercial use. These technologies are capable of measuring metals, oils, chlorinated solvents and bacteria.

**Open Forum**

The group next discussed some of the issues from past working groups and other issues that have been derived from this meeting. The list goes as follows:

1. NAVSEA Chemical List
   1.1. Acquisition
   1.2. Revision
2. Technical Requirements
   2.1. Maintenance Procedures
      2.1.1. TRI Paints
      2.1.2. Zinc Chromate
   2.2. Acquisition Technical Documentation
   2.3. Information from Activity into Technical Manuals
   2.4. Coordinated HM list for Acquisition/Maintenance program
      2.4.1. Zinc Chromate as an example

2.4.1.1. Lockheed Martin
2.4.1.2. Single Process Initiative?
2.4.2. SHML-Ship HM List
2.4.3. SMCL-Submarine Material Control List
2.4.4. EB List
2.4.5. Activity AUL
2.4.6. Carderock HM evaluation system
2.4.7. Substitution List
2.4.8. Prohibited List
2.4.9. Restricted List

3. Sailor Qualification/Training on P2 Equipment on ships
   3.1. Qualification Standards and continuing qualification process (including Training) incorporated into Job Qualification Requirements (JQR) but not Personnel Qualification System (PQS).
4. HMCM
   4.1. P2 WG responsibilities will be:
      4.1.1. Advocate
      4.1.2. Information sharing
   4.2. NAVSEA Regional Participation
   4.3. Standardized NAVSEA HMCM Process
5. Chinese Antifouling Paint improvement
   5.1. Tom Cook to forward information to Mark Ingle thru Jon Pentzien
   5.2. Comment on Navy Policy on P2 Perspective.
6. Future Shipboard Fluorescent Lamp replacement technology
   6.1. Example, LED, Miniature Lamps
   6.2. NAVSEA 04RE contact Ship Lighting Systems Tech Codes with Idea. Establish a working partnership.
7. Determine ways to use NAVSEA Target Chemical List- P2 WG Subcommittee
   7.1. Maintain NAVSEA Target chemical list
   7.2. Possible Uses
      7.2.1. Provide to vendors
      7.2.2. Facility uses
      7.2.3. PEO and Potential other Navy Uses
      7.2.4. MRC Scrub emphasis
      7.2.5. LCM Technical and logistics documentation revision
      7.2.6. Add to next Desktop Guide revision
   7.3. NAVSEA Technical Documentation Change
   7.4. Substitute Candidate List
   7.5. Membership
      7.5.1. Chair- Dave Alguard, PSNS, Assistant chair Tim Dunn PNSY
      7.5.2. All shipyards
      7.5.3. PEO Ships, Subs, DDX, (Drew Demboski), LPD 17, CV, SEA 05M
   7.6. First meeting late June/early July
8. EMS - Not a P2 WG Initiative by direction
9. SYSCOM Authorized Use List- Charles Dunn project not P2 WG

# NAVSEA P2 WORKING GROUP
# 3-5 JUNE 2003
# Attendees

**Enclosure 1**

| NAME | ORGANIZATION | PHONE | EMAIL | ADDRESS |
|---|---|---|---|---|
| Alguard, David | PSNS Code 106.31 | 360-476-6381 | alguardd@psns.navy.mil | Puget Sound Naval Shipyard<br>1400 Farragut Ave<br>Bremerton, WA 98314-5001 |
| Bieberich, Mary Jo | NSWC Carderock | 301-227-4978 | bieberichmj@nswccd.navy.mil | NSWC Carderock<br>9500 MacArthur Blvd<br>West Bethesda, MD 20817 |
| Bonnes, Ed | CNRSW P2 Program<br>N451B | | bonnes.ed.k@asw.cnrsw.navy.mil | ASW Regional Envir.<br>Bldg 50, Rm 326<br>San Diego CA 92147<br>Attn: Ed Bonnes |
| Brock, Dave | NAVAIR | 904-542-0516 x 122 | brockdl@navair.navy.mil | Building 168, Code 4.3.4<br>NAS JACKSONVILLE<br>Jacksonville, FL 32212-0016 |
| Capehart, David | Purotek Corp | 972-233-9881 | david.capehart@purotek.net | Purotek Corp<br>3361 Boyington Drive Ste 120<br>Carrollton, TX 75006 |
| Carroll, Lyn | PEO Ships/SEA 04R | 202-781-1983 | Carrolllb@navsea.navy.mil | Naval Sea Systems Command<br>1333 Isaac Hull Ave SE<br>Building 197<br>Washington, Navy Yard, DC 20376 |
| Cartwright, Dave | NAVSEA 07TE | 202-781-1183 | CartwrightDA@navsea.navy.mil | Naval Sea Systems Command<br>1333 Isaac Hull Ave SE<br>Building 201<br>Washington, Navy Yard, DC 20376 |
| Chapkovich, Mike | NAVSEA 05M4 | 202-781-1749 | ChapkovichMJ@navsea.navy.mil | Naval Sea Systems Command<br>1333 Isaac Hull Ave SE<br>Building 197<br>Washington, Navy Yard, DC 20376 |
| Clark, Steve | CEC INC | 619-696-6207 | CECINC@pacbell.net | |
| Cokley, Tim | Control Aqua Systems | | | |

# NAVSEA P2 WORKING GROUP
# 3-5 JUNE 2003
# Attendees

| NAME | ORGANIZATION | PHONE | EMAIL | ADDRESS |
|---|---|---|---|---|
| Cook, Tom | NUWC Newport | 401-832-5853 | CookTL@npt.nuwc.navy.mil | NUWC Newport<br>Code 551, B-11<br>1176 Howell, Street<br>Newport, RI 02841 |
| Dunn, Charles | Industrial Hygienist NNSY | 757-636-3765 | DunnCR@nnsy.navy.mil | |
| Dunn, Tim | P2 PM, PNSY | 207-438-3831 | dunntp@mail.ports.navy.mil | Portsmouth Naval Shipyard<br>Code 106.31D<br>Portsmouth, NH 03804-5000 |
| Figueira, Jim | CEC Inc | 714-288-8781 | Jfigueira@ecschem.com | PO Box 12032<br>Orange, CA 92859 |
| Fredrickson, Bob | NFESC | 805-982-4897 | Fredricksonra@nfesc.navy.mil | NFESC, Code 423<br>Port Hueneme, CA 93043 |
| Gray, Kimberly | BAE Systems | 202-203-6533 | Kimberly.d.gray@baesystems.com | BAE SYSTEMS<br>300 M Street SE, Ste 200<br>Washington, DC 20003 |
| Guttery, David | Precision Dynamics | 817-313-9202 | | |
| Haight, Dexter | Deputy for OSHE/ SUPERVISOR of Shipbuilding, Conversion and Repair, USN, San Diego | 619-556-1053 | HaightDR@supship.navy.mil | |
| Jackson, Drew | NSWC Carderock | 301-227-5243 | jacksondf@nswccd.navy.mil | |
| Klimas, Robert | NSWCCD-SSES | 215-897-1208 | klimasrr@nswccd.navy.mil | 5001 S Broad St<br>Code 635<br>Naval Business Center<br>Philadelphia PA 19112 |

# NAVSEA P2 WORKING GROUP
# 3-5 JUNE 2003
# Attendees

| NAME | ORGANIZATION | PHONE | EMAIL | ADDRESS |
|---|---|---|---|---|
| McDonald, James | Control Aqua Systems | 806-799-4643 | drwater1@cox.net | |
| Mukai, Alan | PHNSY NSY/IMF | 808-473-8000 x 4462 | mukaiay@phnsy.navy.mil | Pear Harbor NSY & IMF<br>667 Safeguard St<br>Code 106.3<br>Pearl Harbor, HI 96860 |
| Pentzien, Jon LTJG | NAVSEA 04RE | 202-781-3358 | Pentzienj@navsea.navy.mil | Naval Sea Systems Command<br>1333 Isaac Hull Ave SE<br>Building 197<br>Washington, Navy Yard, DC 20376 |
| Putman, Mike | SSC SD Code 2361 | 619-553-2926 | putnam@spaware.navy.mil | SPAWARSYSTEMS Center San Diego<br>Code 2361<br>53475 Strothe RD<br>San Diego, CA 92152-6335 |
| Prevatt, Juliana | NAVSEA 04RE | 202-781-1794 | prevattjs@navsea.navy.mil | Naval Sea Systems Command<br>1333 Isaac Hull Ave SE<br>Building 197<br>Washington, Navy Yard, DC 20376 |
| Root, Caitlin LCDR | INSURV | 757-462-7578 x3097 | root@insurv.nosc.mil | INSURV<br>2600 Tarawact<br>Suite 250<br>Norfolk VA 23521 |
| Seligman, Pete | SPAWAR | | Peter.Seligman@navy.mil | |
| Starrette, Nicole | NNSY Code 106.3 | 757-396-7231 x 194 | starrettekn@nnsy.navy.mil | K. Nicole Starrette<br>Code 106.3, Environnemental Engineer<br>Norfolk Naval Shipyard<br>Building M-22, 3rd Floor<br>Portsmouth, VA 23709-5000 |
| Sobieck, Tom | CEC Inc | | | |

# NAVSEA P2 WORKING GROUP
# 3-5 JUNE 2003
# Attendees

| NAME | ORGANIZATION | PHONE | EMAIL | ADDRESS |
|---|---|---|---|---|
| Torres, Bert | SUPSHIP San Diego | 619-556-1055 | torreslr@supship.navy.mil | NAVSEA San Diego C141<br>3600 Surface Navy Blvd<br>San Diego, CA 92136-5066 |
| Tibbs, Terry | NAVSUP | | Terry.tibbs@navy.mil | |
| Tittle, Charles | FASTT | 202-781-1833 | tittlece@navsea.navy.mil | Naval Sea Systems Command<br>1333 Isaac Hull Ave SE<br>Building 197<br>Washington, Navy Yard, DC 20376 |
| Turlington, Randy | | | | |
| Vozzella, Bob | FASTT | 207-438-1610 | Vozzella_RC@navsea.navy.mil | Portsmouth Naval Shipyard<br>Code 106.00T Bldg 44/2<br>Portsmouth, NH 03804-5000 |
| Zlateff, Ben | BAE Systems | 360-396-7089 | ZlateffBJ@kpt.nuwc.navy.mil | BAE Systems<br>PO Box 440<br>Keyport, WA 98345 |

# NAVSEA P2 WORKING GROUP
# 3-5 JUNE 2003
# Action Items

**Enclosure 2**

**Action Items**

P2 WG San Diego Action Items

- Work with INSURV to get onto distribution for Quarterly INSURV Newsletter. INSURV CDR Root & NAVSEA 04RE LTJG Jon Pentzien-7/7/03
- Obtain a copy of the Electric Boat Solvents Study to be distributed to the working group. Dave Cartwright, Jon Pentzien -7/7/03
- Provide a brief synopsis of Chinese antifouling paint improvement to SEA 05M1 Mark Ingle- Tom Cook; Jon Pentzien. -7/7/03
- Send NAVSEA Targets Chemical List to SPAWAR Mike Putnam- Jon. Pentzien -7/7/03
- Currents Magazine distributed to SUPPO and AEPC on each ship – Jon Pentzien forward to Kathy Jones NFESC Due date 9/12/03
- Notify Dave Cartwright, and Lyn Carroll of other shipboard equipment cabinets that are using Zinc Chromate- WG Members Due date before next P2 WG meeting